CONTACT DUPLICATING AND RESEAU PRINTER
AND

HIGH RESOLUTION STEP AND REPEAT PRINTER

EIGHTEENTH MONTHLY LETTER REPORT

JANUARY 10, 1966

Period: December 1, 1965 to January 1, 1966

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1.0 CONTACT DUPLICATING AND RESEAU PRINTER

1.1 Purpose

The over-all objective of the current contract is the design, fabrication, test, and delivery in fifteen months of a Photographic, Step and Repeat, Contact Duplicating and Reseau Printer. Prime design goals are high-speed automatic operation, variable format capability, and high resolution with minimum film distortion or damage. The delivered equipment will be suitable for operational use. The printer will accommodate films of 70 mm to $9\frac{1}{2}$ " width with frame lengths up to 30 inches and will provide operation in the reseau mode and selective mode as options.

1.2 Activity of this Report Period

	The first reseau grid and glass platen have been completed	
STAT	by the and delivered to for	STAT
	test and alignment. The spare grid and platen are in the final	
	stages of fabrication and should be delivered this month.	
	Preliminary exposure tests on film atindicate	STAT
	that newton fringes may present a problem. In anticipation, plans	
	are being formulated to provide anti-newton fringe coatings on all	
	platens as a precautionary measure. This will require shipment to	
STAT	the only coating vendor located	
	to date capable of handling the dimensions of the platens.	

A recent modification to the film transport utilizing a constant

speed D.C. servo-controlled motor and a mechanical transmission looks very promising from preliminary tests. Further tests with all film sizes will be required prior to installation into the deliverable printer.

Transistor failures in the frame edge detector circuits have delayed final tests of this device in Washington. Cause of the failures is being investigated, and a reschedule test date will be established as soon as possible.

The printer installation base has been completed, and is ready for installation at the customer's facility. It is contemplated that delivery of the base will be accomplished when the test bed is delivered for test of the frame edge detector.

Final assembly of the deliverable printer is continuing, and preliminary testing has started. Tests of the exposure control indicate a modification is required so that simultaneous lamp time-out can be provided when there is a uniform density in the gate. Two methods of accomplishment are under study.

1.3 Plans for Next Period

Final installation of the transport and frame edge detector circuits will be made after satisfactory tests have been made on the breadboard unit. Final test and delivery are planned.

1.4 Problems

Frame edge detector tests will be performed in Washington at

the customer's facility due to lack of availability of specific test films.

1.5 Documentation

There was no new documentation this month.

1.6 Questions Outstanding

Lack of funds and change of scope questions are still unresolved.

2.0 HIGH RESOLUTION STEP AND REPEAT PRINTER

2.1Purpose

The purpose of this effort is to design, fabricate, test and deliver in twenty months a high precision, step and repeat, photographic contact printer. This printer will be capable of producing photographic contact prints of the highest possible quality, resolution, acutance from roll films of width varying from 70 mm to $9\frac{1}{2}$ " and in preselected frame lengths from 5 inches up to a maximum of 30 inches.

2.2 Activity of This Report Period

All activity has been stopped as of October 13, 1965, when a verbal stop work order was received at from the Contracting Officer.

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A meeting was held at on 7 December, 1965 with the technical monitors and a government auditor. Discussions centered around justifications for the change of scope.

Possible modifications to adapt the printer for use with a

new film code were discussed. Preliminary specifications of the new code were presented, and it was recommended that ______ determine STAT the cost of modifying printer 2 to read the new code as well as using frame edge sensing, in the event that the code be adopted by the customer.

A presentation of change of scope details was made to the customer on December 17, 1965. The design specifications of Printers 1 and 2 were presented with accomplishments to date, and the change of scope details were more fully discussed. No decision was made at the meeting regarding the start up of printer 2; however, it is contemplated that a meeting will be held by the customer late in December for determination of future funding.

Two new technical monitors were introduced, who would be responsible for future program liaison.

2.3 Plans for Next Reporting Period

An estimate for modification of printer 2 for adaptation to the new code will be prepared.

2.4 Questions Outstanding

Change in scope question and lack of funds has not been resolved.